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External liberalization, specialization, and institutional change in times of globalization: The case of central, east and southeast Europe

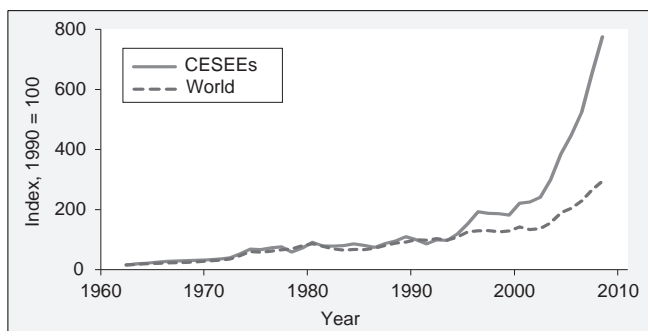
Richard Frensch

During the early nineties, central, east and southeast European countries set on liberalizing their economies on an unprecedented scale, including more or less speedy or profound external liberalizations in country-specific approaches. Since then, we have observed increasingly differentiated changes in these countries' legal institutions. Based on a small but growing literature, we may conjecture that both observations do not only describe a chronological sequence but a causal relationship. This note discusses this conjecture and argues that the globalization of production processes acts as a channel in this causal relationship. Whether or not trade liberalization helps in improving countries' domestic legal institutions depends on the nature of openness emanating from liberalization: some countries firms' joined fragmented, globalized production processes, for others, the dependence on primary products even increased.

Liberalization, trade and trade patterns

External liberalizations in central, east and southeast Europe (CESEE) during the early nineties were followed by tremendous increases in the region's external trade, about four times as large as the growth of world trade.

Figure 1: Real exports, Selected CESEEs vs. World (1962 – 2007)

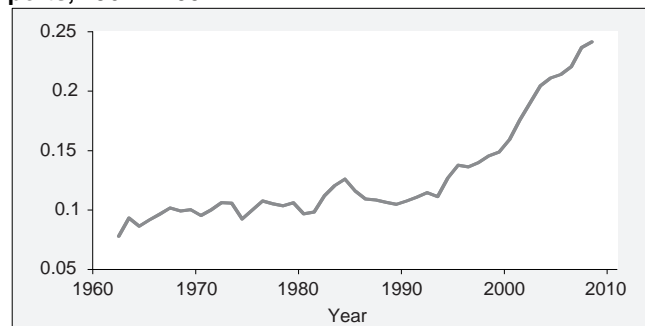


Source: Levchenko and Zhang (2012), based on UN ComTrade.

CESEEs: Czech Republic, Slovakia, Hungary, Poland, Slovenia, Estonia, Latvia, Lithuania, Bulgaria, Romania, Macedonia, Russia, Ukraine, and Kazakhstan.

In a regional perspective, most of this trade has been with western European neighbours.

Figure 2: CESEEs share in total western Europe's imports, 1962 – 2007



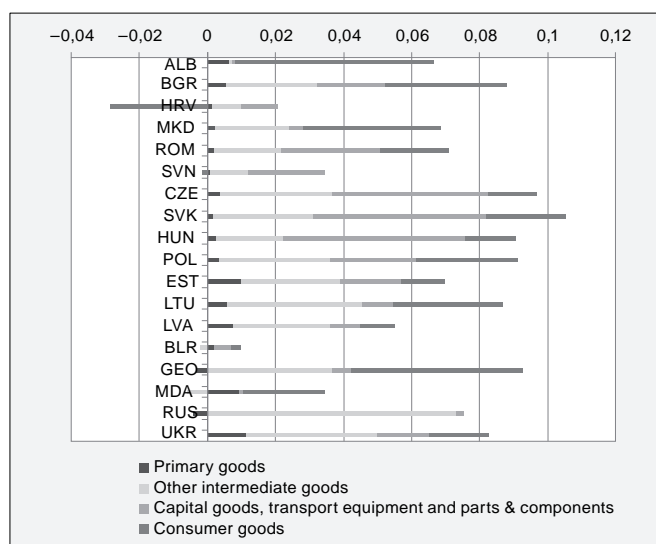
Source: Levchenko and Zhang (2012).

CESEEs as in Figure 1; western Europe is the EU-15 plus Iceland, Norway, and Switzerland.

In terms of trade patterns, this massive expansion can to a large degree be accounted for by (i) trade growth, specifically of goods used in production, i.e., parts,

components and final capital goods and transport equipment, and other intermediate goods (see Figure 3 for CESEE exports to their most prominent destination in Western Europe, i.e., Germany), and (ii) a strong rise in newly traded goods, rather than volume growth in already traded goods (see Eck, 2009). Of course, these trade pattern changes were more or less pronounced from country to country.

Figure 3: Average annual rates of change of exports to Germany, split into growth contributions of different goods categories (1995 – 2010)



Source: Own computations, based on UN ComTrade.

Negative bars have to be subtracted from positive bars to obtain total growth rates. Data include all goods except fuels and lubricants; The United Nations Statistics Division's Classification by BEC (Broad Economic Categories, available online at <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=10&Lg=1>) allows for headings of trade nomenclatures (SITC or HS) to be grouped and rearranged, on the basis of trade nomenclature categories' main end use, to approximate the basic System of National Accounts (SNA) activities: primary goods, intermediate goods, capital goods, and consumer goods.

Trade patterns and the globalization of production

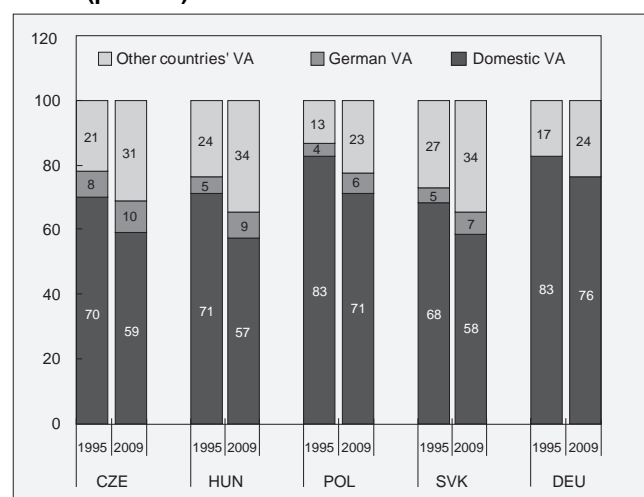
Technical change in production is driven by *fragmentation*, i.e., deepening the division of labour by splitting up production processes into increasing numbers of smaller production processes or *tasks*, resulting in increasing numbers of parts, components and final goods as the outputs of these tasks. Fragmentation makes more specialization possible and may potentially lead to the dislocation of individual tasks. This dislocation of tasks may take on international dimensions, leading to the globalization of production processes in the form of *international vertical production networks* of firms along the value chain. This process appears to be especially relevant for the production of transport equipment and capital goods in general.

The liberalization and external opening up of CESEE countries during the early nineties occurred nearly simultaneously with significant strides towards the globalization of production. Thus, the early nineties were a particularly good time for integrating into international

vertical production networks. The changing trade patterns of the CESEE countries, put into effect by external liberalizations, indeed signal that many firms joined international – especially east-west European – vertical production networks, formed especially in the automobile industry, but also in transport equipment more generally, and in fact in the whole area of capital goods production. Vertical production networks have most prominently – but not exclusively – been formed between establishments in Germany, the Czech Republic, Slovakia, Hungary and Poland (IMF, 2013).

As the CESEE countries are relatively labour-rich compared to western Europe, the *a priori* expectation is to see their firms specializing on labour-intensive tasks within European production networks. This was indeed the case at the outset, where it is important to note that factor intensities do not inform about the position of tasks along the value chain: in CESEE countries, both parts and components as well as final capital goods and transport equipment are all being produced, implying strong bilateral trade flows in parts, components, and final capital goods across Europe (see Frensch et al., 2012). This results in both substantial western European value added in CESEE countries' exports, as much as the other way round. This is exemplified in Figure 4 for the most prominent case of this integration by vertical production networks, Germany, the Czech Republic, Slovakia, Hungary and Poland.

Figure 4: Composition of total exports by source of value added (percent)



Source: IMF (2013).

But why have western European firms joined especially central, east and southeast European counterparts to form specifically *European* vertical production networks? Can't the rest of the world offer to western Europe what the CESEE countries can offer?

From the point of view of comparative advantage a country can "offer" specialization in production and trade: the more similar two countries, the less they have to offer to each other. For a worldwide sample of 79 countries (of which 17 are west European, 14 CESEE, with the re-

maintaining 46 pretty well matching the rest of the world), Levchenko und Zhang (2012) estimate, on the basis of 19 different industrial sectors, similarity indices of sectoral productivities. The similarity of sectoral productivity vectors between the CESEE average and the average of the rest of the world is very high, with a coefficient of correlation beyond 0.9! I.e., from the perspective of western Europe, CESEEs represent a group of different countries that mirror the rest of the world quite well – but are closer, and thus cheaper to trade with.

Table 1: GDP-weighted correlations of sectoral labour productivities

With CESEEs		With western Europe		With rest of the world
Netherlands	0.282	Estonia	0.533	CESEEs > 0.9
Ireland	0.417	Kazakhstan	0.537	
Germany	0.880	Russia	0.820	
Switzerland	0.928	Poland	0.921	
Finland	0.926	Slovenia	0.916	
Pairwise correlations				
Netherlands – Russia		0.16		
Germany – Estonia		0.474		
Germany – Poland		0.984		

Source: Levchenko and Zhang (2012).

Traditional welfare assessments of external liberalizations

Episodes of external liberalization in the order of magnitude as happened in central, east and southeast Europe during the early nineties are rare – and are welcomed by trade economists as offering natural experiments for quantitative studies on the welfare gains from liberalization.

With comparative advantages determining specialization and trade, welfare gains from trade depend – apart from outright declining trade costs – upon country sizes (with larger countries being less open on average than smaller ones) and structural differences between countries. Thus, CESEEs that are more similar to western Europe stand less to gain compared to those that are less similar. Consider the examples of Poland *versus* Estonia, where the first is structurally much more similar to Western Europe than the second. Accordingly, Poland's welfare gains from liberalizing its trade (less than 4%) are much smaller than Estonia's (beyond 17%).

The gains for western Europe from liberalizing CESEEs can be viewed as gains of now also being able to trade with CESEEs, on top of the existing possibilities to trade with the rest of the world. As from the point of view of western Europe, CESEEs on average are very similar to the rest of the world, these gains are comparatively small, and welfare gains accruing to western Europe are confined to declining trade costs.

Table 2: Welfare gains from CESEE liberalization in western and eastern Europe, without factor reallocation

West	Δ Welfare (%)	East	Δ Welfare (%)
Austria	0.388	Bulgaria	10.566
Belgium–Luxembourg	0.119	Czech Republic	6.033
Denmark	0.170	Estonia	17.251
Finland	0.240	Hungary	7.860
France	0.074	Kazakhstan	6.777
Germany	0.213	Latvia	11.931
Greece	0.136	Lithuania	8.911
Iceland	0.180	Macedonia, FYR	8.733
Ireland	0.157	Poland	3.891
Italy	0.126	Romania	6.848
Netherlands	0.120	Russian Federation	2.349
Norway	0.100	Slovak Republic	8.053
Portugal	0.024	Slovenia	6.702
Spain	0.058	Ukraine	5.263
Sweden	0.170	Mean	7.941
Switzerland	0.079		
United Kingdom	0.066		
Mean	0.142	Mean	7.941

Source: Levchenko and Zhang (2012).

Welfare gains from liberalization compare autarky to trade costs in the early 2000s, without factor reallocation across sectors.

However, productivity and welfare changes resulting from external liberalization may well go beyond static, once and for all gains from exploiting comparative advantages:

- Trade opening induces reallocations from relatively less to relatively more productive sectors of the economy, or firms within sectors.
- External liberalization and subsequent specialization tends to be accompanied by foreign direct investment, e.g., into capacities for vertical production networks, from which in turn productivity gains will spill over into purely domestic production.
- Vertical production networks create strong ties between different countries' industrial production, and thus induce synchronization of business cycles: for the east-west European case, strong German export dependence will spill over to CESEEs.
- Recent research identifies institutions as the root cause of cross-country differences in incomes and productivities. If external liberalization were to affect institutional change, this effect might potentially dwarf all others that external liberalizations might bring about.

Institutional change: Liberalization, export patterns and the Rule of Law

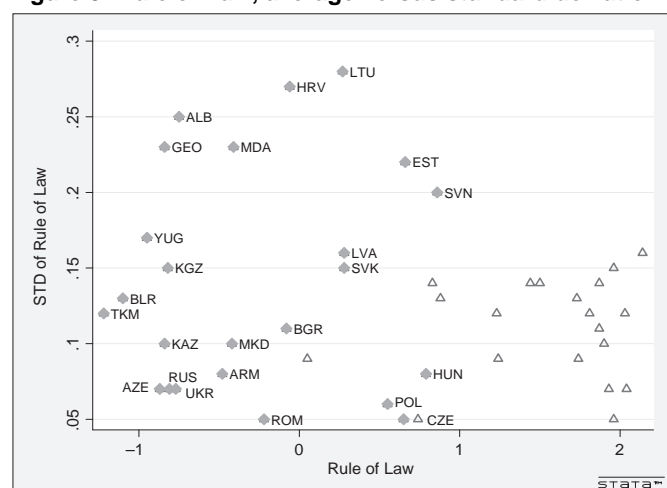
Trade patterns react to the quality of – especially legal – institutions which can strengthen or weaken comparative advantages (Nunn and Trefler, 2013). At the heart of this influence lies a combination of hold-up problems and incomplete contracts, according to which a more complex organization of production profits from a more com-

plete legal setting of rights and responsibilities between the partners in production. A more complete legal setting, in turn, is brought about by a higher quality of legal institutions that economists routinely refer to as Rule of Law, a notion that stresses in particular the quality of contract enforcement and property rights. Accordingly, the better the Rule of Law, the less contested and insecure the distribution of the returns to investment will be in complex production processes, and the smaller the investment inefficiency due to that insecurity. Consequently, countries with a better Rule of Law specialize and export relatively more in industries that are “Rule-of-Law-intensive,” i.e., industries that are characterized by a high complexity of production processes.

That in turn more international openness should have a positive impact on the quality of institutions has actually been postulated for quite some time already, especially on historical examples, as of opening up the Atlantic trade since the 16th century that strengthened the merchant class to subsequently act as a lobby for institutional change. A more stringent theoretical justification for this conjecture has recently been put forward by Levchenko (2012):

- As already noted, a good Rule of Law generates comparative advantage in industries that are characterized by a high complexity of production processes.
- A bad Rule of Law results in a lack of security about the returns to an investment: thus, it may generate rents for non-investors, i.e., participants in the production process other than the investors, e.g., trade unions or upstream or downstream producers in production networks. In consequence, these non-investors may use their rents to lobby for a bad Rule of Law.

Figure 5: Rule of Law, average versus standard deviation



Source: Own computations, based on Worldbank data, for 1996 – 2006. Rule of Law is normalized within –2.5 and +2.5, to measures “the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts as well as the likelihood of crime and violence” (Worldwide Governance Indicators, online at: <http://info.worldbank.org/governance/wgi/index.aspx#countryReports>). In this and the following figures, western countries (unlabelled in Figure 5) comprise Austria, Belgium, Denmark, Finland, France, Ireland, Germany, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, Canada, and the USA.

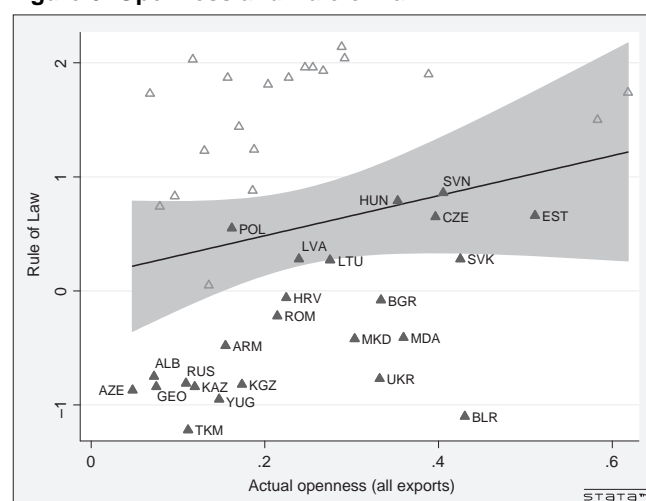
- However, opening up the economy to international competition may force non-investors to lobby for a better Rule of Law in their country, unless they want to lose all their rents to foreign producers that already work under a better Rule of Law.

Consequently, opening a country up to trade may improve legal institutional quality; and in the long run, countries that have a comparative advantage in Rule-of-Law-intensive goods – that is not based on the Rule of Law itself – will tend to have a better Rule of Law.

To observe these forces at work, we need to observe variety in legal institutions, but institutions are persistent and change in episodes rather than continuously. One of these episodes, however, is the transition of formerly planned economies in central, east and southeast Europe.

Figure 5 records the comparatively high volatility in the Rule of Law of CESEE countries over time, during the decade following their liberalization, and also shows the gain in cross-country variation in the Rule of Law when adding these countries to a pool of western European and North American countries. To take an example: for that decade, the Rule of Law indicator for Slovenia averaged slightly less than 1, while its volatility during this decade can be described by the standard variation of about 0.2. This is a much higher standard variation than for the non-CESEE countries in Figure 5, which witnessed very little change of their Rule of Law in that particular period of time.

Figure 6: Openness and Rule of Law



Source: Own computations, based on data from the EBRD, the Worldbank, and UN ComTrade.

The shaded area illustrates the 95% confidence band around the estimated line of regression.

Using the same pool of countries like in Figure 5, Figure 6 juxtaposes countries' openness, as defined by total exports relative to GDP, with their respective Rule of Law, all averaged over the decade following CESEE countries' liberalization. While this figure indeed illustrates a positive relationship between openness and the Rule of Law in a cross-country context, two remarks are in order: first, the rather broad shaded band around the line of regression signals a lack of statistical significance for the postulated positive relationship.

Second, in this figure, the endogeneity, i.e., the reciprocal nature of influence between trade patterns and institutions is not taken care of: we know that openness, as measured with actual trade data depends on the quality of legal institutions. Therefore, in order to say anything empirically meaningful on the influence of trade patterns on institutions, the reciprocal influence has to be cut off. This can be done *via* a two-step approach (see Frensch, 2013; for an alternative approach, see Levchenko, 2012): in the first step, we construct “predetermined” openness measures for different categories of goods that are independent from the respective country’s Rule of Law.

Whether production and trade is in consumer goods, capital or intermediate goods makes an enormous difference in terms of the complexity of use, as witnessed by the fact that elasticities of substitution differ markedly between use categories. Goods used in production are by far more complementary than consumer goods, this is again even more true for intermediate goods, and here in particular for these goods that form the core of fragmentation and dislocation driving the globalization of production. Fragmented processes of production are particularly prone to hold-up problems connected with incomplete contracts, and can thus *a priori* be assumed to benefit most from improvements in the quality of legal institutions. Thus, we will concentrate on trade flows and resulting openness measures generated by fragmented production processes that can be supposed to be Rule-of-Law intensive: capital goods, transport equipment, and their parts and components.

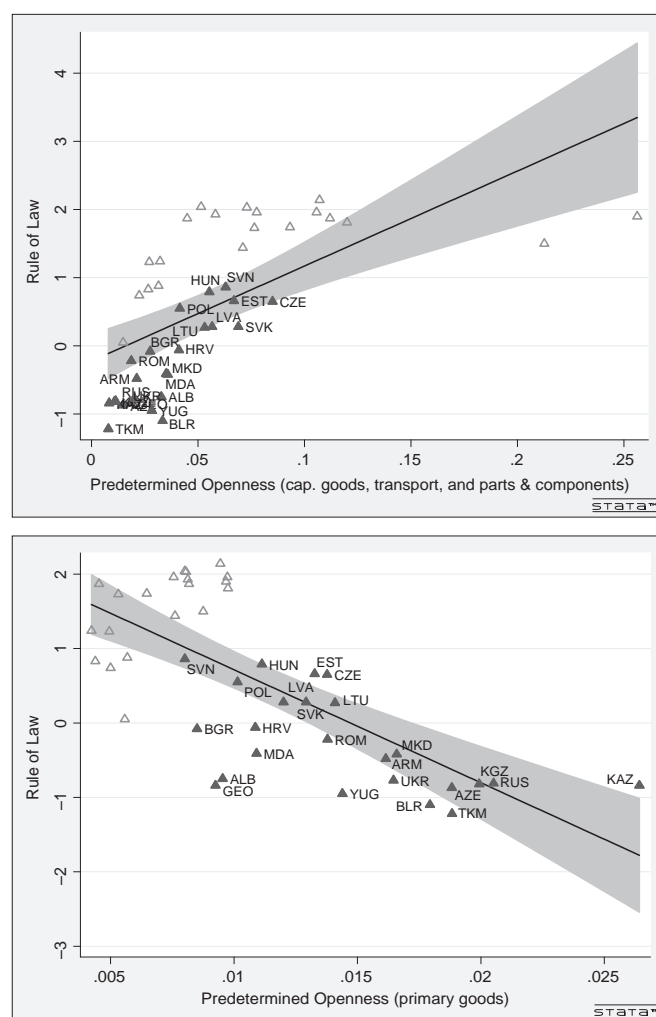
However, we do not use observed openness measures. Rather, we determine openness measures, within a gravity approach, purely on the basis of geography (especially distance to export markets) and the degree of trade liberalization that is exogenous for transition countries as part of IMF programs during their liberalization. By construction then, countries’ “predetermined” openness measures are independent from the countries’ Rule of Law.

In a second step, we then regress the quality of the Rule of Law on predetermined openness measures.

Figure 7 illustrates the result of this two-step procedure. It shows a positive relationship that by construction can be understood as causal, between a measure of predetermined openness in capital goods, transport equipment and their respective parts and components, all generated by fragmented, Rule-of-Law intensive production processes, and the Rule of Law. Accordingly, a country’s firms’ “natural potential” to be – due to geographic location and degree of trade liberalization – part of fragmented production processes within vertical production networks should in the long run positively influence the quality of the country’s legal institutions.

The figure suggests that the positive legal institutional developments of specifically the central European and Baltic countries was at least in part brought about by their substantial involvement in fragmented production processes within European vertical production networks. This has been true to only lesser degrees for Southeast European, and to much lesser degrees for former Soviet Union countries.

Figure 7: Predetermined sectoral openness measures and Rule of Law



Source: Own computations, based on data from the EBRD, the Worldbank, and UN ComTrade.

The shaded area illustrates the 95% confidence band around the estimated line of regression.

Of course, other influences must be at work as well: Figure 7 reveals that there is a large amount of Rule of Law variation between countries with identical predetermined openness in goods generated by fragmented production processes. These other influences, as argued at length in Levchenko (2012), should most notably include the quality of political institutions and legal traditions.

Other influences, however, may also include influences on the Rule of Law from predetermined openness in goods other than those generated by fragmented production processes. Figure 7 also shows a very specific feature of the well known “resource curse”, according to which economic development is hindered by a country’s heavy reliance on producing and exporting primary goods: the negative relationship between countries’ predetermined openness in terms of primary commodities and the Rule of Law is well in line with our picture of the role of the Rule of Law in the economy as developed above: concentration on primary commodity production and trade creates rents that are potentially eas-

ily contestable and insecure, as evidenced amply by the recent economic history of Russia and other former Soviet Union countries. This cannot work in favour of a good Rule of Law.

Conclusions

External liberalization in central, east and southeast Europe happened during a phase of intensifying globalization of production, enabling firms from the region – “as if” a representative sample from the rest of the world – to join east-west European vertical production networks, especially in transport equipment, but also in capital production generally, concentrating at least initially on labour-intensive tasks.

Within international vertical production networks, CESEE firms are present in all stages of production. Thus, the effects of liberalization on countries’ trade patterns show up most prominently in newly traded parts, components, capital goods and transport equipment.

Apart from well-known welfare gains from liberalization, this specific pattern of specialization and trade – most prominently observed in Hungary, Poland, the Czech Republic and Slovakia – can be argued to have assisted in bringing about fundamental institutional consequences. It has done so together with political institutions and legal traditions, but potentially in conflict with other patterns of specialization that do not favour a positive legal institutional change, such as specifically a specialization on primary production.

While this sounds like a belated triumph of Washington Consensus based transition programs during the early nineties, two caveats are in order:

- There is no reason to assume that Washington Consensus based transition programs during the early nineties led to a generally better quality of institutions. While trade liberalisation may *ceteris paribus* positively impact Rule of Law, there is ample suspicion of negative effects of other program elements on the quality of institutions, especially in the field of privatisation.
- While much of the argument above was for a race to the top of the quality of legal institutions in response to liberalization, there is evidence on globalization processes to induce a race to the bottom in terms of the quality of labour market institutions, at least when this quality is judged from the perspective of labour. If both views are correct, they together shape an interesting choice for participants in the economic policy lobbying game.

Whether or not recent steps taken towards deeper trade liberalization by EU Association Agreements, concluded with Ukraine, Moldova and Georgia, might help to not only increase welfare by trade gains, but by improving the Rule of Law would then depend on the nature of “more openness” emanating from this further liberalization: will these countries’ firms join fragmented, globalized production processes, or will their dependence on primary products even be increased, because this is all they have to offer, at least in the short and medium term?

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